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ROBERT W STROZIER, P.L.L.C			EXAMINER	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

09/699,805

Applicant(s)

THORNTON, WILLIAM

Examiner

Binh-An D. Nguyen

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 18 October 2007.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1,2,8-10,14-16 and 25-27 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1,2,8-10,14-16 and 25-27 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
- ☐ Certified copies of the priority documents have been received.
 - ☐ Certified copies of the priority documents have been received in Application No. _____.
 - ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------------------|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

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DETAILED ACTION

The Amendment filed October 18, 2007 has been received. According to the Amendment, claims 1, 2, and 25 have been amended.

Currently, claims 1, 2, 8-10, 14-16, and 25-27 are pending in the application. Acknowledgment has been made.

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 1, 8-10, and 14 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Abrahamson et al. (3,520,071).

Referring to claim 1, Abrahamson discloses an apparatus for simulating a pulse and correlated heart beat of an animal including human, the apparatus comprising a playback device (e.g., computer 300, Fig 2) for generating a first electronic signal

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corresponding to a pulse (col. 3, line 73) and a second electronic signal corresponding to a correlated heart beat (col. 3, line 73), a tactile pulse simulator for receiving the pulse signal and generating a pressure pulses simulating an arterial pulse discernible by touch (col. 8, lines 39-44, lines 48-52; Fig.12) and an audio simulator for receiving the correlated heart beat signal (col. 9, lines 40-45) and recreating the heart beat to be heard through a stethoscope (50, Fig.12) (col. 4, lines 8-9). Note that, the applicant's disclosure suggested that these sounds could be computer generated, and preferably are reproduced using pre-recorded sounds from an actual person (Specification, page 66, lines 2-3). Abrahamson further teaches the electronic signals are computer generated (4:8-16; 9:38-57). Further, note that, the amended limitation of "wherein the simultaneous generation of correlated heart sounds and touch discernible arterial pulses is sufficient to allow training of medical practitioners to discriminate between normal cardiovascular function and abnormal cardiovascular function" is inherent from Abrahamson's teaching of using a stethoscope to diagnose the heart rate of the manikin. Abrahamson does not explicitly teach the amended limitation of the first and second electronic signals are generated from recordings of living animals including humans, however, it is notoriously well known to alternatively utilize and playback authentic pre-recorded natural sounds, to enhance the reality of a sound generation system.

Regarding claim 8, Abrahamson discloses that the tactile pulse simulator comprises a collapsible tube apparatus (8:39-47).

Regarding claim 9, Abrahamson discloses that the tactile pulse simulator and the audio simulator are housed within a housing (6:10-11; 9:72-74).

Regarding claim 10, Abrahamson discloses that the tactile pulse simulator comprises a resilient cover covering a tactile switch capable of generating pulses simulating the arterial pulse (9:57-72).

Regarding claim 14, Abrahamson discloses that the tactile pulse simulator is within a first housing (193) and the audio simulator is within a second housing (190) (Figure 12).

Claims 2 and 16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahamson (3,520,071) in view of Takashina et al. (6,461,165).

Referring to claim 2, Abrahamson discloses an apparatus for simulating a right side pulse and correlated heart beat of an animal, the apparatus comprising a playback device for generating a first electronic signal corresponding to the right side pulse and a second electronic signal corresponding to a correlated heart beat (col. 3, line 73; col. 9, lines 57-72), a tactile pulse simulator for receiving the right pulse signal and generating a pressure pulses simulating a right side arterial pulse discernible by touch (col. 8, lines 39-44, lines 48-52), and an audio simulator for receiving the correlated heartbeat signal (col. 9, lines 40-45) and recreating the heartbeat to be heard through a stethoscope (col. 4, lines 8-9). Note that, the applicant's disclosure suggested that these sounds could be computer generated, and preferably are reproduced using pre-recorded sounds from an actual person (Specification, page 66, lines 2-3). Abrahamson further

teaches the electronic signals are computer generated (4:8-16; 9:38-57). Further, note that, the amended limitation of “wherein the simultaneous generation of correlated heart sounds and touch discernible arterial pulses is sufficient to allow training of medical practitioners to discriminate between normal cardiovascular function and abnormal cardiovascular function” is inherent from Abrahamson’s teaching of using a stethoscope to diagnose the heart rate of the manikin. Abrahamson does not explicitly teach the amended limitation of the first and second electronic signals are generated from recordings of living animals including humans, however, it is notoriously well known to alternatively utilize and playback authentic pre-recorded natural sounds, to enhance the reality of a sound generation system. Furthermore, Abrahamson does not disclose the simulation of a left side pulse along with an electronic signal corresponding to the left side pulse and a tactile pulse simulator for receiving the left pulse signal and generating a pressure pulses simulating a left side arterial pulse discernible by touch. However, Takashina teaches the placement of electric pulse generators (col. 1, lines 63-67) on both sides of the body, more specifically both arms (Figure 2, items 5, 6, 7, and 8). It would have been obvious to one of ordinary skill in the art at the time of invention to place the structure described by Abrahamson on both sides of a manikin as taught by Takashina to create a complete simulation, as opposed to a half-body simulation, of the human heart beat and pulse.

Regarding claim 16, Abrahamson discloses that the tactile pulse simulator comprises a collapsible tube apparatus (col. 8, lines 39-47).

Claims 15 is rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahamson (3,520,071) in view of Takashina (6,461,165), further in view of Elwell (3,298,132).

Abrahamson discloses that the tactile pulse simulator comprises a resilient cover covering a tactile switch capable of generating pulses simulating the arterial pulse (9:57-72). Abrahamson does not expressly disclose that the first housing simulates a human wrist or that the tactile pulse simulator is located at a position in the wrist corresponding to a position in the patient where the arterial pulse is detected and monitored. However, Takashina teaches that the pulse generators can be located at the brachial artery or radial artery positions (col. 4, lines 63-67). It would have been obvious to one of ordinary skill in the art at the time of invention to place the pulse generator at the wrist in order to simulate the pulse at a position on the human body where it is commonly known that the pulse is easy to detect.

Claims 25-27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Abrahamson (3,520,071) in view of Takashina (6,461,165).

Referring to claim 25, Abrahamson discloses an apparatus for simulating a pulse and correlated heart beat of a human, the apparatus comprising a playback device for generating an electronic signal corresponding to the right side pulse and a second electronic signal corresponding to a correlated heart beat (col. 3, line 73; col. 9, lines 57-72); a first housing including a first tactile pulse simulator for receiving the right side arterial pulse signal and generating a pressure pulses corresponding to a right arm

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arterial pulse discernible by touch (col. 8, lines 39-44, lines 48-52); and a second housing including an audio simulator for receiving the heart beat signal and generating an audible recreation of the correlated heartbeat (col. 9, lines 40-45) and designed to be heard through a stethoscope position on a surface of the housing (col. 4, lines 8-9).

Note that, the applicant's disclosure suggested that these sounds could be computer generated, and preferably are reproduced using pre-recorded sounds from an actual person (Specification, page 66, lines 2-3). Abrahamson further teaches the electronic signals are computer generated (4:8-16; 9:38-57). Further, note that, the amended limitation of "wherein the simultaneous generation of correlated heart sounds and touch discernible arterial pulses is sufficient to allow training of medical practitioners to discriminate between normal cardiovascular function and abnormal cardiovascular function" is inherent from Abrahamson's teaching of using a stethoscope to diagnose the heart rate of the manikin. Abrahamson does not explicitly teach the amended limitation of the first and second electronic signals are generated from recordings of living animals including humans, however, it is notoriously well known to alternatively utilize and playback authentic pre-recorded natural sounds, to enhance the reality of a sound generation system. Furthermore, Abrahamson does not disclose a second electronic signal corresponding to the left side pulse and an additional housing including a second tactile pulse simulator for receiving the left side arterial pulse signal and generating a pressure pulses corresponding to a left arm arterial pulse discernible by touch. However, Takashina teaches the placement of electric pulse generators (col. 1, lines 63-67) on both sides of the body, more specifically both arms (Figure 2, items 5, 6,

7, and 8). It would have been obvious to one of ordinary skill in the art at the time of invention to place the structure described by Abrahamson on both sides of a manikin as taught by Takashina to create a complete simulation, as opposed to a half-body simulation, of the human heart beat and pulse.

Regarding claim 26, Abrahamson, as modified by Takashina, discloses that the tactile pulse simulator comprises a collapsible tube apparatus (col. 8, lines 39-47).

Regarding claim 27, Abrahamson, as modified by Takashina, discloses that the tactile pulse simulators comprise a resilient cover covering the tactile switch capable of generating pulses simulating the arterial pulse (9:57-72).

Response to Arguments

Applicant's arguments filed October 18, 2007 have been fully considered but they are not persuasive.

Applicant argued that the reference of Abrahamson does not teach the limitation of simultaneous monitoring of touch sensitive pulse simulators and a stethoscope (Applicant's remarks, page 6, last paragraph) is deemed not to be persuasive. Abrahamson discloses an apparatus for simulating a pulse and correlated heart beat comprising a playback device (e.g., computer 300, Fig 2) for generating a first electronic signal corresponding to a pulse (col. 3, line 73) and a second electronic signal corresponding to a correlated heart beat (col. 3, line 73), a tactile pulse simulator for receiving the pulse signal and generating a pressure pulses simulating an arterial pulse discernible by touch (col. 8, lines 39-44, lines 48-52; Fig.12) and an audio simulator for

receiving the correlated heart beat signal (col. 9, lines 40-45) and recreating the heart beat to be heard through a stethoscope (50, Fig. 12) (col. 4, lines 8-9). Thus, Abrahamson does anticipate applicant's claimed limitations.

Applicant argued that the reference of Abrahamson (and/or Takashina/Elwell) does not teach the limitation of correlated heart sounds and pulses that are based on recording of living animals (Applicant's remarks, page 7, 1st paragraph; page 11, 1st full paragraph) is deemed not to be persuasive. Regarding the amended limitation of the first and second electronic signals are generated from recordings of living animals including humans, it is notoriously well known to alternatively utilize and playback authentic pre-recorded natural sounds, to enhance the reality of a sound generation system.

Applicant argued that the Abrahamson device is not capable simultaneously generating heart sounds and correlated right and/or left side touch discernible pulses for the training of medical practitioners in discriminating between normal cardiovascular function and abnormal cardiovascular function through hearing and touch only. (Applicant's remarks, page 8, 2nd paragraph) is deemed not to be persuasive. As being addressed above, this limitation is inherent from Abrahamson's teaching of using a stethoscope to diagnose the heart rate of the manikin (Fig. 12).

Regarding applicant's argument that a medical practitioner using a finger to be trained to discriminate between normal cardiovascular function and abnormal cardiovascular function (Applicant's remarks, page 8, lines 11-13) is deemed not to be persuasive because this limitation has not been claimed.

Applicant argued that combination of Abrahamson and Takashina does not disclose, teach or suggest the simultaneous monitoring of heart sounds and pulses (right and/or left) that are correlated from recording of living animals for training medical practitioners in discriminate between normal cardiovascular function and abnormal cardiovascular function. (Applicant's remarks, page 9, 1st full paragraph) is deemed not to be persuasive. Abrahamson discloses an apparatus for simulating a right side pulse and correlated heart beat of an animal, the apparatus comprising a playback device for generating a first electronic signal corresponding to the right side pulse and a second electronic signal corresponding to a correlated heart beat (col. 3, line 73; col. 9, lines 57-72), a tactile pulse simulator for receiving the right pulse signal and generating a pressure pulses simulating a right side arterial pulse discernible by touch (col. 8, lines 39-44, lines 48-52), and an audio simulator for receiving the correlated heartbeat signal (col. 9, lines 40-45) and recreating the heartbeat to be heard through a stethoscope (col. 4, lines 8-9). Note that, the amended limitation of "wherein the simultaneous generation of correlated heart sounds and touch discernible arterial pulses is sufficient to allow training of medical practitioners to discriminate between normal cardiovascular function and abnormal cardiovascular function" is inherent from Abrahamson's teaching of using a stethoscope to diagnose the heart rate of the manikin. Further, Takashina teaches the placement of electric pulse generators (col. 1, lines 63-67) on both sides of the body, more specifically both arms (Figure 2, items 5, 6, 7, and 8). It would have been obvious to one of ordinary skill in the art at the time of invention to place the structure described by Abrahamson on both sides of a manikin as taught by Takashina

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to create a complete simulation, as opposed to a half-body simulation, of the human heart, beat and pulse. Thus, the combination of Abrahamson and Takashina does make obvious applicant's claimed limitations.

Conclusion

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Binh-An D. Nguyen whose telephone number is 571-272-4440. The examiner can normally be reached on Monday-Friday.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on 571-272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

BN



Robert E Pezzuto
Supervisory Patent Examiner
Art Unit 3714